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(54) CERIUM OXIDE ABRASIVE, POLISHING OF SUBSTRATE AND SEMICONDUCTOR DEVICE

(57)Abstract:

PROBLEM TO BE SOLVED: To provide a cerium oxide abrasive which is difficult to sediment and which can polish a surface to be polished, such as a SiO₂ insulation film, at a high rate without injuring the surface, and to provide a method for polishing a substrate.

SOLUTION: This cerium oxide abrasive comprises cerium oxide particles, ammonium acrylate-methyl acrylate copolymer, and water. The ammonium acrylate-methyl acrylate copolymer is preferably added in an amount of 0.01-5 pts.wt. per 100 pts.wt. of the cerium oxide particles, has a weight average mol.wt. of 1,000-20,000, and has an ammonium acrylate/methyl acrylate molar ratio of 10/90 to 90/10. The cerium oxide abrasive can polish silica film-formed substrates for semiconductor chips, etc.

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